

# Notice of Allowability

Application No.

09/683,275

Examiner

Joshua Joo

Applicant(s)

BAYER ET AL.

Art Unit

2154

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 6/20/2007.
2. ☒ The allowed claim(s) is/are 1, 2 and 4-13.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All b) ☐ Some\* c) ☐ None of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☒ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date 5.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

## Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date 5.
7. ☒ Examiner's Amendment/Comment
8. ☐ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

***Examiner's Amendment***

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

2. Authorization for this examiner's amendment was given in a telephone interview with Applicant Stanley D. Ference III, Reg. No. 33,879, on September 20, 2007.

**Drawings**

3. Figure 1 of Drawings dated 12/06/2001 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. In the specification, page 4, paragraph 0019, figure 1 is described as a diagram showing the structural elements in a prior art computer system. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

4. The application is amended as follows:

**Claims**

1. (Currently Amended) A method for operating a network coupling adapter attaching one or more computing device via an associated interconnected memory to either one of an I/O periphery, a network, or other computing devices, characterized by the steps of:

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operating a local memory ~~being associated with~~ on the network coupling adapter for storing transmission control information;

operating a system memory of the one or more computing device for storing a plurality of entries, an entry of the plurality of entries comprising work related information for a queue or a queue pair and information other than transmission control information, such that ~~the information~~ the entry stored in the system memory is associated with the transmission control information stored in the local memory, wherein the transmission control information stored in the local memory is received from the entry in the system memory and is used for processing the queue or the queue pair of the entry in the system memory;

and

wherein said step of operating a local memory comprises:

determining if there is room in the local memory for storing the transmission control information and a new transmission control block;

if there is not sufficient room in the local memory for storing the transmission control information and the new transmission control block, moving the transmission control information stored in the local memory to the entry of the system memory and maintaining the association with the ~~entry information~~ other than transmission control information previously stored in the system memory, and storing the new transmission control block in the local memory; and

if there is sufficient room in the local memory for storing the transmission control information, storing the transmission control information and the new transmission control block in the local memory.

3. (Cancelled)

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12. (Currently Amended) A network coupling element coupling one or more computing devices via an associated interconnected memory to either one of an I/O periphery, a network, or other computing devices characterized by hardware and comprising:

a local memory ~~associated with~~ on the network coupling element being operable as a cache memory, such that transmission control information associated with an entry of a plurality of entries ~~information~~ stored in said interconnected memory of the computing device is cached in the local memory and the entry comprising work related information for a queue and information other than transmission control information ~~is stored in the interconnected memory, wherein the transmission control information~~ stored in the local memory is received from the entry in the interconnected memory and is used for processing the queue of the entry in the interconnected memory;

wherein operating the local memory as a cache comprises:

determining if there is room in the local memory for storing the transmission control information and a new transmission control block;

if there is no sufficient room in the local memory based on said determining, moving the transmission control information stored in the local memory to the entry of the interconnected memory and maintaining the association with the entry ~~information other than transmission control information~~ previously stored in the interconnected memory, and storing the new transmission control block in the local memory; and,

if there is sufficient room in the local memory for storing the transmission control information, storing the transmission control information and the new transmission control block in the local memory.

13. (Currently Amended) A network coupling element for coupling one or more computing devices via an associated interconnected memory to an I/O periphery, and operates ~~either has a Host~~

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~~Channel Adapter or a Target Channel Adapter being operable according to InfiniBand Architecture~~ by hardware and comprising:

a local memory ~~associated with~~ on the network coupling element being operable as a cache memory, such that transmission control information associated with an entry of a plurality of entries ~~information~~ stored in said interconnected memory of the computing device is cached in the local memory and the entry comprising work related information for a queue and information other than transmission control information is stored in the interconnected memory, wherein the transmission control information stored in the local memory is received from the entry in the interconnected memory and is used for processing the queue of the entry in the interconnected memory;

wherein operating the local memory as a cache comprises:

determining if there is room in the local memory for storing the transmission control information and a new transmission control block;

if there is no sufficient room in the local memory based on said determining, moving the transmission control information stored in the local memory to the entry of the interconnected memory and maintaining the association with the entry ~~information other than transmission control information~~ previously stored in the interconnected memory, and storing the new transmission control block in the local memory; and,

if there is sufficient room in the local memory for storing the transmission control information, storing the transmission control information and the new transmission control block in the local memory,

wherein the network coupling element operates either as a Host Channel Adapter or a Target Channel Adapter being operable according to InfiniBand Architecture.

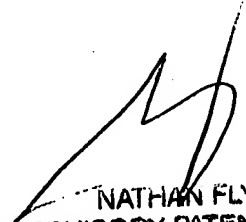
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**Conclusion**

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua Joo whose telephone number is 571 272-3966. The examiner can normally be reached on Monday to Friday 7 to 4. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan J. Flynn can be reached on 571 272-1915. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

September 22, 2007

JJ



NATHAN FLYNN  
SUPERVISORY PATENT EXAMINER